**Week 3 Reflection**

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**Data Strategy** - DAT-5316

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April 16, 2021

**Insight #1. The important components of the Business Analytics Process (BAP) are feedback loops, without which it is practically impossible to create a usable analytics product.**

If we do not consider small companies, where the owner often combines the duties of many specialists, including a business manager and an analyst (if in a small company anyone performs analytical work at all), and therefore sets tasks, solves them and controls the result themselves, one important, if not the most important, reason of BAP failures is lack of understanding between the process participants. This can be both individual employees and structural units involved in the process. Returning to the small enterprise, I would like to clarify that what I said does not mean that the feedback is not important for a small enterprise, I just meant that when it takes place in the head of one person, the probability of misunderstanding is much lower.

As an illustration of the need for feedback, I would refer to aviation (and I have heard there are similar rules in the Navy). When engaged in radio communication with the dispatcher, pilots are instructed to repeat the dispatcher's instructions in such a way that there is no doubt that they are understood and will be obeyed. With respect to certain information, this is a mandatory requirement that must be met, even if the language of communication is the pilot's and the dispatcher's native language and the quality of communication is good. Such so-called "receipts" are designed to eliminate errors in receiving or interpreting information that could lead to a flight accident or even a crash.

Feedback loops in the Business Analytics Process should help eliminate inefficiencies. It is hard to expect a satisfactory result if Exploratory Data Analysis reveals that the available data is incomplete or not credible, or not sufficient at all to solve the business problem at hand. Trying to work with the data that is available will negate the work at all subsequent stages. And it will be good if the shortcomings of the data will be noticed on the Data Preparation step, when not a lot of resources have been spent on working with it, including time, which is often the most important resource. In this case, there is a hope that additional feedback between the Data Audit and Data Preparation steps will be created, which will help eliminate the problem. But if on Data Preparation step employees will approach their responsibilities formally, will work with the data they received, and as a result will not get the result in the form which allows getting insights, the failure of the project or at least a significant loss in its effectiveness is almost guaranteed.

The same applies to all other feedback loops. If the previous step is unaware of the difficulties and needs arising in the next step, there is no opportunity to make adjustments to correct the situation. If the data scientists or analysts do not see the full picture, they will gladly work, creating and improving their models, which in the end will not bring any benefit to the company, but only eat up its resources.

For feedback loops to work, it is necessary to plan appropriate procedures and protocols, as well as to convince employees to accept these innovations. Persuade, not oblige. Because an orderly tone can often give rise to passive opposition, when a manager will be convinced that everything is working, until some time later the result shows that it is not. Perhaps for some professionals it will be clearer if the need for feedback will be explained in a language they understand. For example, in Neural Networks (NN) there is a mechanism of back-propagation. It is used in NN training to perform the fine-tuning of neural network weights on the basis of the error rate obtained in the previous epoch. This analogy can be used to explain to specialists that Business Analytics Process feedback loops are needed for the same purpose - to reduce the error at each stage of analytical product development and formation of its value for the company.

And, of course, feedback is important not only when working on a project in the sandbox, but also after the product goes into deployment. Feedback and recommendations on the results of its implementation, as well as metrics will allow not only to improve the developed product if necessary, but also to apply well-proven practices when working on other projects, which will help reduce the time to bring their results into production.

Thus, feedback loops are sources of added value that should be given as much attention as the business analytics process steps themselves.

**Insight #2. Customer-centric approach can improve Business Analytics Process results.**

According to G. Peters and A. Duncan (2020), “By 2025, over 90% of B2B enterprise sales organizations will continue to rely on intuition instead of advanced data analytics, resulting in inaccurate forecasts, sales pipelines and quota attainment.”. This is not only due to the lack of business analysts on staff and the lack of appropriate units in the company structure, but also due to the fact that senior management does not trust the results of the analytics process. We discussed earlier that this sometimes happens because managers themselves often do not have the appropriate knowledge and experience, and trusting something one does not understand seems quite risky. On the other hand, as Hegel wrote, practice is the criterion of truth. If analytics does not prove its effectiveness, there is no need for it.

In particular, the wrong approach can cause harm from the very beginning. For example, when segmenting customers, it is common to operate on regions, points of sales, and products. In some cases, this works, because the appearance of a competitor's store near the point of sales, or the downsizing in the company, which employs some customers, are likely to turn into a decline in sales. However, there is no need to create complex analytical models to predict this effect. There may be a situation where a competitor's store, located nearby, announces a promotion or a sale. This, too, will affect sales in that particular outlet, but such an outcome can be easily explained and sometimes even predicted. Moreover, special marketing actions of competitors are usually temporary in nature. The objective of analytics, ideally, in my opinion, is to identify insights, on the basis of which strategic decisions can be made that can increase the competitiveness of the business for a noticeable period of time.

In this sense, company analysts need to pay more attention to the customer-centric approach. The customer-centric approach operates on the common characteristics of customers. Knowing customers is one of the most valuable assets. When a company knows who their customers are, what they buy, what their motivations for purchases are, what their values are and what their priorities are, as well what their buying habits are, the correct segmentation will help to identify groups of customers similar in these characteristics. This, in turn, will help to determine why a certain group stopped buying or began buying less and to plan responses to remedy the situation, if such measures make economic sense or are consistent with the strategic objectives of the company.

The latter needs to be determined before practical steps are taken. It makes no sense to invest a million dollars in a marketing campaign if it will get a thousand customers back into the stores, whose lifetime value is a thousand dollars. Such an investment would not pay off, because there is a cost of money to consider. However, in some cases, particularly if the company's goal is to win a larger market share, such an investment is quite acceptable.

This once again confirms the first insight - analytics must take into account business goals, so the Business Analytics Process requires fast and effective feedback, and, in more general terms, good communication between the analysts and the business. This brings us to the third insight.

**Insight #3. For analytics to become a company asset, it is not enough to hire stars of analytics, it is equally important to have good business translators on the team.**

It is common for people, especially those who have achieved notable success in their fields, to rely on their own knowledge and experience. However, if that knowledge and experience is narrowly specialized, which is the case in a large number of situations, that professional can misinterpret tasks, misunderstand needs, make erroneous steps, and draw mistaken conclusions. If this specialist is a business analyst, at best this situation will lead to underutilization of data potential, and at worst it can lead to losses. And those losses are not just the costs of having a team of analysts. A marketing campaign planned on the basis of incorrect insights, and not properly tested in the sandbox, can turn into huge losses.

To minimize the likelihood of such mistakes, it is essential to have the help of people who understand different areas, in this case, analytics, technologies, and business named business translators. Three of eleven listed G. Miranda (2018) Centers of Excellence tasks are performed involving business translators.

Diagram, venn diagram

Description automatically generatedA. Diaz et al. (2018) provide a clear and detailed scheme of the distribution of roles in the Business Analytics Process.

**Figure 1** Roles in BAP

However, in my opinion, ideally translators should occupy a position at the intersection of all three domains, as indicated by N. Lin (2015).

Diagram, venn diagram

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**Figure 2** Bulls-eye of analytics

This insight is certainly important for companies, but it is also extremely important for us, the analytics students in the business school, many of whom have an MBA and solid experience in various business fields, as it allows us to formulate our competitive advantages and correctly position ourselves in the labor market.

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